

CLAIMS

What is claimed is:

5        1. A method of merging document files into a printing workflow comprising the steps of:  
            providing a plurality of document files, each of said files comprising one or more pages, at least one of said files a scan file;  
            displaying an image of each page of each of said document files;  
10        selecting at least one page from each of at least two of said document files; and  
            combining said selected pages in a desired order, wherein said scanned files are merged with said document files on a page-by-page basis so that said combined pages comprise a new document file.

15        2. The method of Claim 1, wherein said providing step comprises the steps of:  
            providing said at least one scan file, said scan file comprising any of a scanned document file and a scanned image file, wherein said scan file is a raster data file;  
20        optionally, converting said scan file to any of a bitmap file and a PDL (page description language) file;  
            providing at least one additional file, said additional file comprising any of another scan file and a pre-existing print file, said additional file comprising any of a raster data file, a bitmap file and a PDL file.

25        3. The method of Claim 2, wherein the step of providing said scan file comprises the steps of:  
            providing a scanning device and a color print server;  
            scanning a document, wherein a user initiates and customizes a scan  
30        using a first software module; and  
            storing said scan file.

4. The method of Claim 3, wherein said first software module resides on said print server and includes a user interface, said user interface comprising any of a GUI connected to said server, an LCD panel mounted on said print server and  
5 a control panel on said scanning device.

5. The method of Claim 3, wherein said first software module resides on said print server, said print server being embedded in a color copier, an interface to said first software module comprising a control panel to said color copier.  
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6. The method of Claim 3, wherein said first software module resides on a client workstation in communication with said print server, said software module including a GUI.

15 7. The method of Claim 3, wherein said scan file is stored on a mass storage device connected to said print server.

8. The method of Claim 3, wherein said scan file is stored on a mass storage device connected to said workstation.  
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9. the method of Claim 3, wherein said scan file is stored to a network location specified by said user.

25 10. The method of Claim 3, wherein said scanner is equipped with an automatic document feeder (ADF).

11. The method of Claim 3, wherein said scanner comprises any of the platen of a copying machine and a dedicated scanner.  
30 12. The method of Claim 3, wherein said scanner is connected to said print server.

13. The method of Claim 3, wherein said scanner is connected to said workstation.

5    14. The method of Claim 3, wherein said document scanning step comprises the steps of:

- specifying a scanning device;
- specifying one of image scan and document scan;
- specifying video-based image modifications to be made during said
- 10    scan, said modifications including compression and color space transformations.
- specifying scan mode;
- specifying resolution;
- specifying any of single sided and duplex;
- 15    specifying page orientation;
- specifying a destination for said scan file; and
- executing a scan document command.

15. The method of Claim 14, wherein said destination specifying step

20    comprises at least one of:

- specifying a file name for said scan file;
- specifying a PDL format for said scan file;
- specifying a network location for said scan file;
- specifying an address for email notification of said scan file's location;

25    and

- specifying a fax destination for said scan file.

16. The method of Claim 3, wherein the step of providing said scan file further comprises the step of retrieving said stored scan file from a mailbox, said scan

30    file being temporarily stored in said mailbox.

17. The method of Claim 16, further comprising the step of modifying said scan file, said modifications including:

scan mode;  
brightness;  
5 threshold;  
contrast;  
scaling;  
specifying source type;  
color conversion;  
10 rotate;  
crop;  
unsharp mask;  
deskewing;  
file format; and  
15 compression format.

18. The method of Claim 3, wherein said images comprise thumbnail images of said pages, and wherein said selection step comprises selecting thumbnail images corresponding to desired pages using a pointing device, wherein said 20 thumbnail images are displayed by one of said first software module and a second software module.

19. The method of Claim 18, wherein said pointing device comprises a mouse.

25 20. The method of Claim 18, wherein said combining step comprises using said pointing device to drag said selected thumbnail images so that they are placed in a desired order, and wherein said corresponding pages are assembled in the same order.

30 21. The method of Claim 20, further comprising the step of:

saving merging instructions generated by said combining step as a merge template, wherein said merge template is usable at a future time with another set of document files.

5 22. The method of Claim 1, wherein said combining step comprises selecting and applying a previously created merge template, said merge template comprising instructions for combining said selected pages in a specified order.

10 23. The method of Claim 22, said merge template further comprising at least one of:

instructions for imposing multiple pages on a single sheet;

instructions for resizing pages;

specified color choices;

specified layout options; and

15 specified print options.

24. The method of Claim 1, wherein said combining step comprises the steps of:

providing scripted merging instructions; and

20 applying said scripted merging instructions;

wherein said merging instructions comprise instructions for combining pages in a specified order and at least one of:

instructions for imposing multiple pages on a single sheet;

instructions for resizing pages;

25 specified color choices;

specified layout options; and

specified print options.

25. The method of Claim 1, wherein said combining step comprises the steps of:

30 creating merging instructions using a workflow application; and

applying said merging instructions;  
wherein said merging instructions comprise instructions for combining pages in a specified order and at least one of:  
instructions for imposing multiple pages on a single sheet;  
5 instructions for resizing pages;  
specified color choices;  
specified layout options; and  
specified print options.

10 26. The method of Claim 3, wherein said page description language comprises any of POSTSCRIPT (PS), Portable Document Format (PDF) and Page Construction Language (PCL).

15 27. A system for merging scan files into a printing workflow comprising;  
a print server;  
a client workstation in communication with said print server;  
a scanning device, said scanning device connected to one of said workstation and said print server;  
means for initiating and customizing scans, said scans performed by said  
20 scanning device; and  
means for merging said scan files with document files on a page-by page basis so that a single, merged document file is produced.

25 28. The system of Claim 27, wherein said means for initiating and customizing scans comprises a first software module; and said means for merging said scan files with said document files comprises a second software module.

30 29. The system of Claim 28, wherein said scan files and said document files include one or more pages, and wherein said second software module displays images of said pages, so that a user may select at least one page from at least one scan file and at least one page from at least one document file and

combine said selected pages in a desired order, said combined pages comprising a new document file.

30. The system of Claim 29, wherein said scan file is a raster data file, said  
5 scan file comprising any of a scanned document file and a scanned image file  
and wherein said raster data file is convertible to any of a bitmap file and a PDL  
file; and

wherein at least one additional file is provided, said additional file  
comprising any of another scan file and a pre-existing print file, said additional  
10 file further comprising any of a raster data file, a bitmap file and a PDL file.

31. The system of Claim 30, wherein said first software module resides on said  
print server, and includes a user interface, said user interface comprising any of:  
a GUI (Graphical User Interface) connected to said print server, an LCD panel  
15 connected to said print server and a control panel on said scanning device.

32. The system of Claim 30, wherein said first software module resides on said  
client workstation, said second software module including a GUI.

20 33. The system of Claim 30, wherein a user initiates a scan from said first  
software module and stores the resulting scan file.

34. The system of Claim 33, wherein said scan file is stored on a mass storage  
device connected to said print server.

25 35. The system of Claim 33, wherein said scan file is stored on a mass storage  
device connected to said workstation.

36. The system of Claim 33, wherein said scan file is stored at a network  
30 location specified by said user.

37. The system of Claim 30, wherein said scanning device includes an automatic document feeder.

38. The system of Claim 30, wherein said scanning device comprises any of  
5 the platen of a copying machine and a dedicated scanner.

39. The system of Claim 30, wherein said scanning device is connected to said print server

10 40. The system of Claim 30, wherein said scanning device is connected to said workstation.

41. The system of Claim 30, said means for initiating and customizing scans further comprising means for:  
15 specifying a scanning device;  
specifying one of image scan and document scan;  
specifying video-based image modifications to be made during said scan, said modifications including file compression format and color space transformations;

20 specifying scan mode;  
specifying resolution;  
specifying one of single-sided and duplex;  
specifying page orientation;  
specifying a destination for said scan file; and

25 executing a scan document command.

42. The system of Claim 41, wherein said means for specifying a file destination further comprises at least one of:  
means for specifying a file name for said scan file;  
30 means for specifying a mailbox for said scan file, said mailbox comprising a designation for a storage location of said scan file;

means for specifying a PDL format for said scan file;  
means for specifying a network location for said file;  
means for specifying an address for email notification of said scan file's  
location; and

5 means for specifying a fax destination for said file.

43. The system of Claim 30, said means for initiating and customizing a scan  
file further comprising means for retrieving and modifying said scan file, said  
modifications including:

10 scan mode;

brightness;

threshold;

contrast;

scaling;

15 specifying source type;

color conversion;

rotate;

crop;

unsharp mask;

20 deskewing;

file format; and

compression format.

44. The system of Claim 30, further comprising a pointing device, said images  
25 comprising thumbnail images of said pages, wherein said user selects  
thumbnail images corresponding to desired pages using said pointing device.

45. The system of Claim 44, wherein said pointing device comprises a mouse.

30 46. The system of Claim 44, wherein said user combines said pages by using  
said pointing device to drag said selected thumbnail images so that they are

placed in a desired order, and wherein said corresponding pages are assembled in the same order.

47. The system of Claim 46, further comprising a merge template, said merge template comprising merging instructions generated and saved during said combining of pages.

48. The system of Claim 30, further comprising at least one previously saved merge template, wherein said merge template is selected, and includes instructions for combining said selected pages in a specified order.

49. The system of Claim 48, said merge template further comprising at least one of:

- instructions for imposing multiple pages on a single sheet;
- instructions for resizing pages;
- specified color choices;
- specified layout options; and
- specified print options.

50. The system of Claim 30, wherein said page description language comprises any of POSTSCRIPT (PS), Portable Document format (PDF) and Page Construction Language (PCL).

51. A system for copying documents, said system being functionally equivalent to a copying machine, comprising:

- a print server;
- a print engine connected to said print server;
- a client workstation in communication with said print server;
- a scanner attached to said client workstation; and

30        a software module, said software module permitting said print engine and said scanner to function as a copying machine.

52. The system of Claim 51, wherein said software module comprises a user interface, said user interface resembling the controls of a color copier, so that a user is able to specify parameters for a copying job in the same manner as they  
5 would on a dedicated copying machine.

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PROPRIETARY MATERIAL  
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